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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/510,210

11/17/2006

Kazuo Nishikawa

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EXAMINER

AFREMOVA, VERA

ART UNIT

PAPER NUMBER

1657

NOTIFICATION DATE

DELIVERY MODE

05/29/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/510,210	Applicant(s) NISHIKAWA, KAZUO	
	Examiner Vera Afremova	Art Unit 1657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2009 and 09 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,5-8,12 and 14-25 is/are pending in the application.
- 4a) Of the above claim(s) 14-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,5-8,12 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/05/04;5/10/07;3/18/08;4/13/09</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 3, 5-8, 12, 14-24 as amended and new claim 25 (supplemental reply filed on 2/09/2009) are presently pending.

Claims 1, 2, 4, 9-11 and 13 were canceled by applicants.

Election/Restrictions

Applicant's election with traverse of the Group I (original claims 1-13; presently pending claims 3, 5-8, 12 and 25) in the reply filed on 1/05/2009 is acknowledged. The traversal is on the ground(s) that there is no serious burden in searching and examining all groups of claims. This is not found persuasive because different groups of claims are drawn to products and methods having different scope as claimed and, thus, the references that would be applied to one group of claims would not necessarily anticipate or render obvious the other group(s). Moreover, as to the question of burden of search, classification of subject matter is also an indication of the burdensome nature of the search involved. The literature search, particularly relevant in this art, is not co-extensive and is much more important in evaluating the burden of search. Burden in examining materially different groups having materially different issues also exists. Clearly different searches and issues are involved with each group. For these reasons, the restriction requirement is deemed proper and is adhered to. The restriction requirement is hereby made FINAL.

Claims 14-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected groups of inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction requirement in the reply filed on 1/05/2009.

Claims 3, 5-8, 12 and 25 are under examination in the instant office action.

Information Disclosure Statement

The information disclosure statement filed 10/05/2008 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered in full. The references from BF to BO that are lacking copies were crossed out.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 25, 3, 5-8 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Menzies et al. (“Germicidal ultraviolet irradiation in air conditioning systems: effect on office worker health and wellbeing: a pilot study”. Occup. Environ. Med. 1999, Vol. 56, pages 397-402).

Claims are directed to a method for evaluating elimination of microorganisms wherein the method comprises steps of installing a wind tunnel inside a container, forming a passage of air containing microorganisms inside the wind tunnel, supplying the air containing microorganism in the space inside of the wind tunnel from one side of the wind tunnel, carrying out the sterilizing of the microorganisms to irradiate particles comprising ions to the air containing microorganisms, sampling the microorganisms from the air or particles after irradiation from the other side of the wind tunnel, and measuring the concentration or activity of

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the sampled microorganisms to evaluate the performance of elimination of the microorganisms of said particles from the result of measures. Some claims are further drawn to changing time intervals for irradiation and measurements; to evaluation of dependency of elimination on particles concentration. Some claims are further drawn to microorganisms in a form of mist; to measuring microorganisms by cell culture; to microorganisms being bacteria, mycetes and/or viruses.

Menzies et al. discloses a method for evaluating elimination of microorganisms by germicidal ultraviolet irradiation in air conditioning systems (entire document including abstract). The UV lights are installed inside ventilation air conditioning systems (page 398, col.1, par. 2) and the ventilation air condition system would be a wind tunnel inside a container with a passing through air containing microorganisms within the meaning of the claims. The microorganisms are bacterial and fungal cells and the microorganisms are airborne and, thus, in a form of mist. All variables including microbial cell counts, concentration of dust or dust particles with microorganisms are detected and measured inside rooms, in supply air, in return air (table 3) and, thus, "from the other side of wind tunnel" within the meaning of the claims. The amounts of microorganisms are measured by cell culture (page 398, col. 2, second par, from the bottom). The evaluation is done by using different germicidal lamps and over several time periods over 3 weeks. Thus, the cited method for evaluating elimination of microorganisms comprises same active steps and same structural elements as required by the claimed method including steps of installing a wind tunnel inside a container (providing air conditioner), forming a passage of air containing microorganisms inside the wind tunnel, supplying the air containing microorganism in the space inside of the wind tunnel from one side of the wind tunnel (turning the air

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conditioner on), carrying out the sterilizing of the microorganisms to irradiate with UV light particles comprising ions to the air containing microorganisms (air dust with microbes), sampling the microorganisms from the air or particles after irradiation from the other side of the wind tunnel (collecting air samples in the rooms), and measuring the concentration or activity of the sampled microorganisms to evaluate the performance of elimination of the microorganisms of said particles from the result of measures (measuring cell count by cell culture). Therefore, the cited reference is considered to anticipate the claimed invention.

Claims 25, 3, 5-8 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/87364 (IDS reference).

Claims as above.

The cited WO 01/87364 teaches a method for evaluating of elimination of microbial cells with ion generating device in air conditioning system, for example: see abstract; example 24 and tables 8 and 9 (see US 2003/0072675 for equivalent translation). The method of WO 01/87364 for evaluating elimination of microorganisms appears to comprise same active steps and same structural elements as required by the claimed method. Therefore, the cited WO 01/87364 is considered to anticipate the claimed invention.

Claims 25, 3, 5-8 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Osawa (IDS reference; Fair Trade Commission. 2001).

Claims as above.

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The reference by Osawa recites a method for evaluating of elimination of microbial cells in bacterial and viral mist aerosols after sterilizing treatment with air purifiers, for example: see English translation page 3. The Osawa's method for evaluating elimination of microorganisms appears to comprise same active steps and same structural elements as required by the claimed method. Therefore, the cited reference by Osawa is considered to anticipate the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25, 3, 5-8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menzies et al. ("Germicidal ultraviolet irradiation in air conditioning systems: effect on office worker health and wellbeing: a pilot study". Occup. Environ. Med. 1999, Vol. 56, pages 397-402), WO 01/87364 (IDS reference), Osawa (IDS reference; Fair Trade Commission. 2001).

Claims as above.

The cited reference by Menzies et al., WO 01/87364 and the reference by Osawa are relied upon as explained above for the disclosure of a method for evaluating elimination of microorganisms in air by using a wind tunnel inside a container with means for sterilization and by measuring amounts of microbial cells at the exit of air from the container. All 3 cited references teach evaluation of various means and interval of sterilization in the wind tunnel containers.

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In addition, US 6,171,548 (Rose et al) is relied upon to demonstrate a model of a wind tunnel container with means for sterilization of air (figure 7; col. 9-10) that is suitable for evaluation of sterilization effects on airborne microorganisms (bioaerosols) with the use of standard and HEPA filters (col.12, lines 1-3).

Thus, the claimed invention as a whole was clearly *prima facie* obvious, especially in the absence of evidence to the contrary, to one having ordinary skill in the art at the time the claimed invention was made.

The claimed subject matter fails to patentably distinguish over the state art as represented by the cited references. Therefore, the claims are properly rejected under 35 USC § 103.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vera Afremova whose telephone number is (571) 272-0914. The examiner can normally be reached from Monday to Friday from 9.30 am to 6.00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon P. Weber, can be reached at (571) 272-0925. The fax phone number for the TC 1600 where this application or proceeding is assigned is (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 1600, telephone number is (571) 272-1600.

Vera Afremova

May 22, 2009

/Vera Afremova/

Primary Examiner, Art Unit 1657